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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,012	12/16/2005	Jan Lindskog	P17752-US1	1229
27045	7590	03/17/2008	EXAMINER	
ERICSSON INC. 6300 LEGACY DRIVE M/S EVR 1-C-11 PLANO, TX 75024				CHAMBERS, TANGELA T
ART UNIT		PAPER NUMBER		
4141				
MAIL DATE		DELIVERY MODE		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/595,012	LINDSKOG ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	TANGELA T. CHAMBERS	4141	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 16 December 2005.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-20 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 16 December 2005 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
|   | 6) <input type="checkbox"/> Other: _____ .                        |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date : December 16, 2005, June 9, 2006 and October 2, 2007.

## **DETAILED ACTION**

1. This action is in response to the preliminary amendment filed on 12/16/2005.
2. Claims 1-20 have been amended.
3. Claims 21-22 have been canceled.
4. Claims 1-20 are pending.

### ***Priority***

5. If applicant desires to claim the benefit of a prior-filed application under 35 U.S.C. 119(e), a specific reference to the prior-filed application in compliance with 37 CFR 1.78(a) must be included in the first sentence(s) of the specification following the title or in an application data sheet. For benefit claims under 35 U.S.C. 120, 121 or 365(c), the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of the applications.

If the reference to the prior application was previously submitted within the time period set forth in 37 CFR 1.78(a), but not in the first sentence(s) of the specification or an application data sheet (ADS) as required by 37 CFR 1.78(a) (e.g., if the reference was submitted in an oath or declaration or the application transmittal letter), and the information concerning the benefit claim was recognized by the Office as shown by its inclusion on the first filing receipt, the petition under 37 CFR 1.78(a) and the surcharge under 37 CFR 1.17(t) are not required. Applicant is still required to submit the reference in compliance with 37 CFR 1.78(a) by filing an amendment to the first sentence(s) of the specification or an ADS. See MPEP § 201.11.

### ***Information Disclosure Statement***

6. IDS' filed on December 16, 2005, June 9, 2006 and October 2, 2007 have all been acknowledged by the examiner. The reference DE 198 35 643 A1 was not considered as it is written in German.

***Drawings***

7. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: DCCH1, step 415, step 417 and step 418. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

8. Fig. 1 and Fig. 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

9. Fig. 4A is objected to because a step is missing from the flow diagram when there is no suitable bandwidth available. A step needs to be added (when the result is NO at step 402) which states that there are no suitable OVSF codes available. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be

canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

#### **10. The disclosure is objected to because of the following informalities:**

In the abstract, the referral elements (numbers) of the drawings should be deleted.

Throughout the disclosure the word 'optimised' should be replaced with the following spelling – optimized –.

Throughout the disclosure the word 'optimisation' should be replaced with the following spelling – optimization –.

Throughout the disclosure the word 'optimise' should be replaced with the following spelling – optimize –.

Throughout the disclosure the word 'optimises' should be replaced with the following spelling – optimizes –.

Throughout the disclosure the word the word 'preferrably' should be replaced with the following spelling – preferably –.

Page 4, line 10, "Fig. 4A-B" should be replaced with – Figs. 4A - 4B –.

Page 4, line 15, "Fig. 4A-B" should be replaced with – Figs. 4A - 4B –.

Page 5, line 31, the phrase 'a person skilled in the art' should be replaced with 'a person of ordinary skill in the art'.

Page 6, line 7 recites the word 'lenghts' with appears to be a misspelling of the word 'lengths'.

Page 9, line 8, "Fig. 4A-B" should be replaced with – Figs. 4A - 4B –.

Page 14, line14, there should be a period (.) after the word code.

Page 15, line 13 recites the word 'tranferred' with appears to be a misspelling of the word 'transferred'.

Page 15, line 22 recites the word 'previosly' with appears to be a misspelling of the word 'previously'.

Appropriate corrections are required.

***Claim Rejections - 35 USC § 101***

11. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-19 are rejected under 35 U.S.C. 101.

Claim 1 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Although claim 1 is a method claim, it is non-statutory because it does not produce a useful, concrete and tangible result.

Claims 2-10 are dependant on claim 1, and are rejected under the same reason set forth in connection of the rejection of claim 1.

Claim 11 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 11 uses electronic circuitry for channel allocation but is still considered non-statutory because a useful, concrete and tangible result is not produced.

Claims 12-20 are dependant on claim 11, and are rejected under the same reason set forth in connection of the rejection of claim 1.

***Claim Rejections - 35 USC § 102***

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Magnusson (US Patent Publication No. 2003/0099282 A1).

As per claim 1, Magnusson discloses:

- ***A method for allocating channel resources in a radio communication system, the method comprising:*** (Magnusson, Abstract, “A code allocation unit (100) of a radio access telecommunications network allocates one of plural Orthogonal Variable Spreading Factor (OVSF) codes to a radio access connection for use as a channelization code”);
- ***receiving a request for allocation of a channel resource;*** (Magnusson, Page 2, Paragraph [0014]);
- ***allocating a specific channel resource according to a predetermined rule which includes considering an estimate of when said specific channel resource will be released and estimates of when other previously allocated channel resources will be released.*** (Magnusson, Page 3, Paragraphs [0024]-[0031], “In certain modes, the weights can be values related, e.g., to duration of allocation. Such weights referenced are values can be statistically derived. For example, the statistically-derived weights can be based on service type or on individual user behavior.”), In using the duration of the allocation based on service type or individual user behavior to

allocate a channel resource, Magnusson teaches a method of allocation with consideration of when a channel resource will be released.

As per claim 2, the rejection of claim 1 is incorporated and further Magnusson discloses:

- ***said radio communication system is a Code Division Multiple Access based system and said channel resources are spreading codes.*** (Magnusson, Page 4, Paragraph [0051]).

As per claim 3, the rejection of claim 2 is incorporated and further Magnusson discloses:

- ***said spreading codes are Orthogonal Variable Spreading Factor codes*** (Magnusson, Page 4, Paragraph [0052]).

As per claim 4, the rejection of claim 2 is incorporated and further Magnusson discloses:

- ***said channel resources include at least two higher level channel resources said higher level channel resources being associated with at least two lower level channel resources each such that a higher level channel resource is available for allocation only when all lower level channel resources associated with said higher level channel resource also are available for allocation,*** (Magnusson, Fig. 1 – Fig. 2B and Pages 1-2, Paragraphs [0012]-[0013], “Free...No codes in the subtree to (c) and in the branch that leads from (c) to the tree root is busy”), Magnusson teaches channel resources with the higher level resource being available for allocation only when the lower channel resources are available for allocation.
- ***said lower level channel resources having higher spreading factors than said higher level channel resources.*** (Magnusson, Fig. 1 and Page 1, Paragraph [0011]).

As per claim 5, the rejection of claim 1 is incorporated and further Magnusson discloses:

- ***said channel resources are hierarchically organized and include at least two higher level channel resources, said higher level channel resources being associated with at least two lower level channel resources each such that a***

***higher level channel resource is available for allocation only when all lower level channel resources associated with said higher level channel resource also are available for allocation.*** (Magnusson, Fig. 1 – Fig. 2B and Pages 1-2, Paragraphs [0012]-[0013]), Magnusson teaches hierarchically organized channel resources with the higher level resource being available for allocation only when the lower channel resources are available for allocation.

As per claim 6, the rejection of claim 4 is incorporated and further Magnusson discloses: ***according to said predetermined rule:***

- ***if at least two lower level channel resources are available candidates for allocating as said specific channel resource,*** (Magnusson, Fig. 7A and Page 5, Paragraphs [0055]-[0056]).
- ***if said available candidates include both a first and a second subset of lower level channel resources, wherein said first and second subsets include at least one lower level channel resource each, and each lower level channel resource in said first subset is associated with a higher level channel resource which is currently available for allocation while each lower level channel resource in said second subset is associated with a higher level channel resource which is currently not available for allocation,*** (Magnusson, Fig. 7A, Page 3, Paragraph [0022] and Page 5, Paragraph [0061]), Magnusson teaches a method of evaluating available resources based on the number of users at each level. In this manner, it is possible to determine which lower level channel resources have higher level channel resources that are already allocated.
- ***a lower level channel resource in said second subset is selected as said specific channel resource.*** (Magnusson, Fig. 9 and Page 7, Paragraphs [0079]-[0081]), Magnusson presents an example according to an embodiment of his invention where there are two subsets, one with a higher level channel resource available and one with a higher level channel resource allocated. In accordance with the method taught by Magnusson, the lower level channel with the higher level channel resource allocated is selected.

As per claim 7, the rejection of claim 6 is incorporated and further Magnusson discloses:

- ***according to said predetermined rule, if said second subset includes at least two lower level channel resources, said predetermined rule includes comparing estimates for when the higher level channel resources associated with the lower level channel resources in said second subset will become available for allocation with the estimate of when said specific channel resource will be released.*** (Magnusson, Page 2, Paragraph [0013], “Weight ... Every code can be assigned a weight. The weight can be related, e.g., to how long this code will be allocated (based on statistics for different types of services, individual user behavior, etc.”), In assigning a weight based on service type or individual user behavior to allocate a channel resource, Magnusson teaches a method that is capable of estimating when a requested channel resource as well as an allocated channel resource will be released.

As per claim 8, the rejection of claim 7 is incorporated and further Magnusson discloses:

- ***according to said predetermined rule, if said second subset includes both a third and a fourth subset, wherein said third and fourth subsets include at least one lower level channel resource each, and each lower level channel resource in said third subset is associated with a higher level channel resource which is estimated to become available at the same time or after the estimated release of said specific channel resource while each lower level channel resource in said fourth subset is associated with a higher level channel resource which is estimated to become available before the estimated release of said specific channel resource,*** (Magnusson, Pages 2-3, Paragraph [0021] and Fig. 7, Page 5, Paragraphs [0055]-[0058]), Magnusson teaches a method of using combined weight as a way to allocate resources. It is disclosed that the combined weight can be values related to the duration of allocation; therefore, different subsets would have different combined weights based on their estimated duration.
- ***a lower level channel resource in said third subset is selected as said specific channel resource.*** (Magnusson, Fig. 7 and Page 5, Paragraph [0057]),

Magnusson teaches that the channel resource at the level with the largest combined weight is allocated. Based on the method taught by Magnusson, a subset with a higher level channel resource which is estimated to become available at the same time or after the estimated release would be assigned a higher combined weight value than a subset with a higher level channel resource which is estimated to become available before the estimated release of said specific channel resource.

As per claim 9, the rejection of claim 8 is incorporated and further Magnusson discloses:

- ***according to said predetermined rule, if said third subset includes at least two lower level channel resources,*** (Magnusson, Fig. 7A and Page 5, Paragraphs [0055]-[0056]).
- ***a lower level channel resource in said third subset which is associated with a higher level channel resource whose estimated time of becoming available for allocation is closest to the estimated time of release of said specific channel resource, is selected as said specific channel resource.*** (Magnusson, Pages 2-3, Paragraph [0021] and Fig. 7, Page 5, Paragraphs [0055]-[0058]), Magnusson teaches a method of using combined weight as a way to allocate resources. It is disclosed that the combined weight can be values related to the duration of allocation; therefore, a lower level channel resource with a higher level channel resource whose estimated time of becoming available for allocation is closest to the estimated time of release would be assigned a higher combined weight value than a lower level channel resource with a higher level channel resource whose estimated time of becoming available for allocation is not as close to the estimated time of release as said specific channel resource.

As per claim 10, the rejection of claim 7 is incorporated, and claim 10 is rejected under the same reason set forth in connection of the rejection of claim 9.

Claim 11 is the apparatus claim corresponding to the method claim 1 and is rejected under the same reason set forth in connection of the rejection of claim 1.

Claim 12 is the apparatus claim corresponding to the method claim 2 and is rejected under the same reason set forth in connection of the rejection of claim 2.

Claim 13 is the apparatus claim corresponding to the method claim 3 and is rejected under the same reason set forth in connection of the rejection of claim 3.

Claim 14 is the apparatus claim corresponding to the method claim 4 and is rejected under the same reason set forth in connection of the rejection of claim 4.

Claim 15 is the apparatus claim corresponding to the method claim 5 and is rejected under the same reason set forth in connection of the rejection of claim 5.

Claim 16 is the apparatus claim corresponding to the method claim 6 and is rejected under the same reason set forth in connection of the rejection of claim 6.

Claim 17 is the apparatus claim corresponding to the method claim 7 and is rejected under the same reason set forth in connection of the rejection of claim 7.

Claim 18 is the apparatus claim corresponding to the method claim 8 and is rejected under the same reason set forth in connection of the rejection of claim 8.

Claim 19 is the apparatus claim corresponding to the method claim 9 and is rejected under the same reason set forth in connection of the rejection of claim 9.

Claim 20 is the apparatus claim corresponding to the method claim 10 and is rejected under the same reason set forth in connection of the rejection of claim 10.

13. The prior art not relied upon but considered pertinent to applicant's disclosure is made of record and listed on form PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TANGELA T. CHAMBERS whose telephone number is 571-270-3168. The examiner can normally be reached Monday through Thursday, 8:30am-6pm Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chamelei Das, can be reached at 571-270-1392. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tangela T. Chambers  
Patent Examiner  
Art Unit 4141  
March 6, 2008  
/CHAMELI C. DAS/  
Supervisory Patent Examiner, Art Unit 4141